

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.

REMARKS

Claims 19 - 40 are pending. No new matter has been introduced.

Reexamination and reconsideration of the application are respectfully requested.

The Examiner issued an Office Action on April 2, 2004 rejecting claims 1 - 18 under 35 U.S.C. § 103(a) citing a number of references.

Applicants had previously cancelled claims 1 - 18 and added claims 19 - 40 in a Preliminary Amendment filed concurrently with a continuation application on July 9, 2003. The Preliminary Amendment is included as Attachment 1. Verification of submission and receipt of the Preliminary Amendment is provided by a postcard which was received by the United States Patent Office and sent back to the applicant. The postcard is included as Attachment 2.

The specification has been amended to include the proper title of the invention and the related application information.

///

///

///

///

///

///

///

///

///

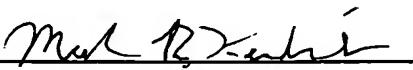
///

Applicant requests an Office Action on the merits for claims 19 - 40. If the Examiner has any questions, the Examiner is requested to call either of the undersigned attorneys at the Los Angeles telephone number (213) 488-7100 to discuss the steps necessary for placing the application in condition for allowance should the Examiner believe that such a telephone conference would advance prosecution of the application.

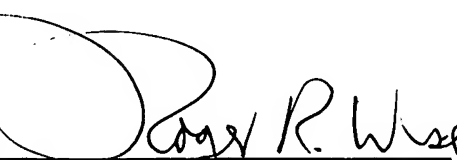
Respectfully submitted,

PILLSBURY WINTHROP LLP

Date: April 20, 2004

By: 
Mark R. Kendrick
Registration No. 48,468
Attorney for Applicant(s)

Date: April 20, 2004

By: 
Roger R. Wise
Registration No. 31,204
Attorney For Applicant(s)

725 South Figueroa Street, Suite 2800
Los Angeles, CA 90017-5406
Telephone: (213) 488-7100
Facsimile: (213) 629-1033



PATENT APPLICATION

P12843C

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: SHI)	
)	
Serial No.: (unassigned))	Group Art Unit: 2819
)	
Parent Serial No. 10/074,200)	
)	
Parent Filing Date: February 12, 2002)	Examiner: J.B. Jeanglaude
)	
For: Parallel to Serial Conversion Device and)	
Method (Amended))	

PRELIMINARY AMENDMENT

ASSISTANT COMMISSIONER OF PATENTS
Washington, D.C. 20231

Dear Sir:

Preliminarily to the examination of this application, claiming priority from U.S.

Patent Appl. 10/074,200 filed on February 12, 2002, please enter the following
amendments and remarks:

Amendment

Title:

Please delete the phrase "A (N-1)/N Current Reduction Scheme in an N-to-1 Parallel-to-Serial Conversion" and replace with - - Parallel to Serial Conversion Device and Method - - therefor.

Claims:

Claims 1 – 18 (canceled).

Claim 19 (new): A 10 Gigabit Attachment Unit Interface (XAUI) device comprising:

- an output device capable of transmitting a serial data signal on a differential signaling pair over printed circuit board traces;
- a plurality of current sources;
- a plurality of selection devices coupled to the output device, each selection device being coupled to an associated one of the current sources to receive a first current when the selection device is active, each selection device being adapted to receive an associated bit of a parallel data signal; and
- a current steering device to direct portions of a second current among a plurality of the current sources associated with inactive selection devices, the second current having a magnitude of about an integer multiple of a magnitude of the first current.

Claim 20 (new): The XAUI device of claim 19, wherein the XAUI device comprises n current sources and n selection devices, and wherein the magnitude of the second current is about an $n-1$ multiple of the magnitude of the first current.

Claim 21 (new): The XAUI device of claim 19, wherein the XAUI device comprises a plurality of output devices, each output device being capable of transmitting a serial data signal on a differential signaling pair over printed circuit board traces.

Claim 22 (new): The XAUI device of claim 19, wherein the parallel data signal comprises a ten-bit code group.

Claim 23 (new): The XAUI device of claim 19, wherein the output device comprises circuitry to transmit the serial data signal on the differential signaling pair in response to bit signals transmitted by the selection devices.

Claim 24 (new): The XAUI device of claim 19, wherein the output device is capable of transmitting the serial data signal on bit intervals, and wherein no more than one selection device is activated during a bit interval to transmit a bit signal to the output device.

Claim 25 (new): The XAUI device of claim 24, wherein a selection device is activated in response to a clock signal.

Claim 26 (new): The XAUI device of claim 19, wherein each selection device is coupled between an associated current source and the output device, and wherein the associated current source is activated to apply a current to the selection device contemporaneously with activation of the selection device.

Claim 27 (new): The XAUI device of claim 19, the XAUI device further comprising a 10 gigabit media independent interface.

Claim 28 (new): A method comprising:

receiving one bit of a parallel data signal at each of a plurality of selection devices, each selection device being coupled to an associated one of a plurality of current sources;

applying a first current to an active selection device;

directing portions of a second current among a plurality of current sources coupled to inactive selection devices, the second current having a magnitude of about an integer multiple of a magnitude of the first current.

Claim 29 (new): The method of claim 28, the method further comprising:

receiving one bit of the parallel data signal at each of n selection devices; and

directing the second current signal among $n-1$ current sources coupled to $n-1$ inactive selection devices,

wherein the magnitude of the second current is about an $n-1$ multiple of a magnitude of the first current.

Claim 30 (new): The method of claim 28, wherein the parallel data signal comprises a ten-bit code group.

Claim 31 (new): The method of claim 28, the method further comprising transmitting a serial data signal in response to bit signals transmitted by the selection devices.

Claim 32 (new): The method of claim 31, wherein the bit signals are transmitted on bit intervals, and wherein the method further comprises activating no more than one selection device during a bit interval to transmit a bit signal.

Claim 33 (new): The method of claim 28, the method further comprising activating a current source contemporaneously with activation of an associated selection device.

Claim 34 (new): A parallel to serial conversion device comprising:

an output device;

a plurality of current sources;

a plurality of selection devices coupled to the output device, each selection device being coupled to an associated one of the current sources to receive a first current when the selection device is active, each selection device being adapted to receive an associated bit of a parallel data signal;

a current steering device to direct portions of a second current among a plurality of the current sources associated with inactive selection devices, the second current having a magnitude of about an integer multiple of a magnitude of the first current.

Claim 35 (new): The parallel to serial conversion device of claim 34, wherein the parallel to serial conversion device comprises n current sources and n selection devices, and wherein the magnitude of the second current is about an $n-1$ multiple of the magnitude of the first current.

Claim 36 (new): The parallel to serial conversion device of claim 34, wherein the parallel data signal comprises a ten-bit code group.

Claim 37 (new): The parallel to serial conversion device of claim 34, wherein the output device comprises circuitry to transmit a serial data signal on a differential signaling pair in response to bit signals transmitted by the selection devices.

Claim 38 (new): The parallel to serial conversion device of claim 34, wherein the output device is capable of transmitting a serial data signal on bit intervals, and wherein no more than one selection device is activated during a bit interval to transmit a bit signal to the output device.

Claim 39 (new): The parallel to serial conversion device of claim 38, wherein a selection device is activated in response to a clock signal.

Claim 40 (new): The parallel to serial conversion device of claim 34, wherein each selection device is coupled between an associated current source and the output device, and wherein the associated current source is activated to transmit a current to the selection device contemporaneously with activation of the selection device.

Remarks

Claims 1 – 18 have been cancelled. Claims 19 – 40 are added. No New matter is added. Examination and consideration of this application, as amended, are respectfully requested. The applicants respectfully submit that the application is in form for allowance. Please charge Deposit Account #02-2666 for any fee payment deficiencies in connection with this application. If the Examiner finds that this case is in any way not in proper form for allowance, the applicants request that the Examiner contact the applicant's representative at (310) 252-7621.

Respectfully submitted,



Paul G. Nagy
Senior Patent Attorney
Reg. No. 37,896

Dated: July 8, 2003

c/o Pillsbury Winthrop, LLP
725 S. Figueroa St., Suite 2800
Los Angeles, CA 90017-5406
voice: (213) 488-7100
fax: (213) 640-7133

81614-
S.N. Unassigned File No. 304847 Date Mailed 7-9-03 By: MRK/mg
Title: Parallel to Serial Conversion Device + Method

(Client Name): Data
The Following, due _____ in the U.S. Patent & Trademark Office was received in the Patent
& Trademark Office on the date stamped hereon:

Amendment
☒ Preliminary Amendment
☐ PCT Application Including
Pages Spec. _____ Page Abstract. _____ Claims
☒ Application for Patent Including (Construction)
21. Pages Spec. 1 Page Abstract. 22. Claims
☒ Declaration, Affidavit of Oath (_____ Page(s)) 6/27
☒ Assign: Ch. No. 6/27 for \$ _____
☐ Verified Statement
☒ Letter of Transmittal
Maintenance Fee Transmittal
☒ Check No. 806338 For \$ 1860.-
☐ Check No. _____ For \$ _____
☒ Check No. _____ For \$ _____
☒ City of Express Mail

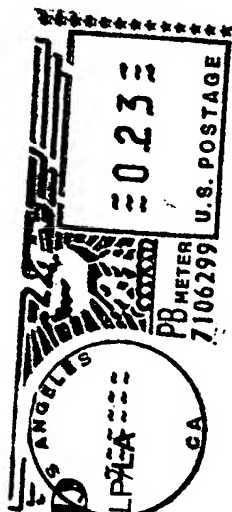
Drawings: # of Sheets _____
_____ Formal ☒ Informal
Issue Fee Transmittal
Letter Re _____
Notice of Appeal
Petition for _____
Advance soft copy order
Ch. No. _____ for \$ _____ of Docs.
Certified Copy: # _____
☒ IDS: 8 References
☒ Form PTO-1449

03806 U.S. PTO.
10/616062



EXPRESS MAIL NO: EV 235 023 886 US





RECEIVED

PILLSBURY WINTHROP LLP

JUL 28 2003

CL# _____ MT# _____
ATTY(S) _____
DUE: _____
DKT BY (1) _____ (2) _____

Attn: Roger R. Wise

Pillsbury Winthrop LLP
726 SOUTH FIGUEROA STREET
SUITE 2800
LOS ANGELES, CALIFORNIA 90017-5406

07

